

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-10 (canceled).

Claim 11 (new): A switching power-supply unit comprising:

an inductor or a transformer;

a plurality of switching elements switching a current flowing in the inductor or the transformer and converting power by turning on and off the switching elements; and

a switching control circuit that turns on the next of the plurality of switching elements in accordance with a change of a voltage or a current generated due to turning off of one of the switching elements in an ON-state, that sequentially turns on and off the switching elements in association with each other, that repeats a series of on-off operations of the switching elements periodically, that determines an ON-period of each of the switching elements in accordance with a condition independently provided for each of the switching elements, and that controls the ON-period of each of the switching elements.

Claim 12 (new): The switching power-supply unit according to Claim 11, wherein a dead time in which two consecutive ones of the plurality of switching elements are turned off is provided between ON-periods of the two switching elements, and wherein the dead time is arranged in accordance with a delay time from turning off of the switching element in the ON-state and turning on of the next switching element.

Claim 13 (new): The switching power-supply unit according to Claim 12, wherein the dead time is set such that the switching element is turned on when a voltage across the switching element becomes zero or is reduced to near zero.

Claim 14 (new): The switching power-supply unit according to Claim 11, wherein the switching control circuit turns on the next of the plurality of switching elements using a voltage at the inductor or the transformer generated due to turning off of the one of the plurality of switching element in the ON-state.

Claim 15 (new): The switching power-supply unit according to Claim 11, wherein the switching control circuit detects an output voltage to a load to determine the ON-period in accordance with the output voltage.

Claim 16 (new): The switching power-supply unit according to Claim 11, wherein the switching control circuit detects a change or a polarity of a voltage generated at the inductor or the transformer to determine the ON-period.

Claim 17 (new): The switching power-supply unit according to Claim 11, wherein the switching control circuit detects the current flowing in the inductor or the transformer to determine the ON-period.

Claim 18 (new): The switching power-supply unit according to Claim 11, wherein the switching control circuit detects a voltage across the switching element to determine the ON-period.

Claim 19 (new): The switching power-supply unit according to Claim 11, wherein the switching control circuit detects a current flowing in the switching element to determine the ON-period.

Claim 20 (new): The switching power-supply unit according to Claim 19, wherein the switching control circuit determines the ON-period of the switching element such that the switching element is turned off when the current flowing in the switching element becomes zero or reaches near zero.